

# **THIRD-PARTY COMPLAINTS AND FIRM PERFORMANCE: AN APPLICATION IN SPANISH BANKING**

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# **THIRD-PARTY COMPLAINTS AND FIRM PERFORMANCE: AN APPLICATION IN SPANISH BANKING**

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## **ABSTRACT**

This article focuses on the impact of third-party complaints on firm performance. We propose two research hypotheses, which are developed from the literature of dissatisfaction, emotions, and economics. The methodology is based on an event study to estimate variation in firm share returns in the stock market due to the publication of the Annual Complaints Service Report by the Bank of Spain; as well as a regression analysis to examine the impact of the number of complaints per branch on the variation obtained. The empirical focus is on a sample of eleven banks to which complaints were made and which were quoted on the Spanish Stock Exchange between 1992 and 2001. The results show a negative impact of the publication of these annual complaint reports on the share returns of the banks concerned. Additionally, these returns have a negative relationship with the number of complaints per branch.

*Keywords: Third-party complaints; Firm performance; Banking industry*

## **RESUMEN**

El objetivo de este trabajo es analizar el impacto de las quejas a terceras partes sobre los resultados empresariales. Para ello, se proponen dos hipótesis de investigación, argumentadas siguiendo la literatura de insatisfacción, emociones, y economía. La metodología se apoya en el *event study* para estimar la variación de la rentabilidad de las acciones de las empresas generada en la Bolsa por la publicación de la Memoria Anual del Servicio de Reclamaciones del Banco de España; así como en el análisis de regresión para examinar el impacto del número de quejas por oficina en dicha variación. La aplicación empírica se lleva a cabo para una muestra de once bancos sobre los que se efectúan las quejas y que cotizan en la Bolsa de Madrid entre 1992 y 2001. Los resultados obtenidos ponen de manifiesto un impacto negativo de la publicación de dichas memorias anuales de quejas sobre la rentabilidad de las acciones de los bancos implicados, y que dicha rentabilidad mantiene una relación negativa con el volumen de quejas por oficina.

*Palabras clave: Quejas a terceras partes; Resultados empresariales; Banca*

## **1. Introduction**

The study of consumer complaint behavior (CCB) has become critical in recent years. Research is based around the study of firstly, the particular type of consumer response through which complaint behavior is manifested –redress seeking, starting legal action, negative word-of-mouth, exit, no action- which has allowed the development of numerous categorisations and taxonomies (e.g., Bearden & Teel, 1983; Best & Andreasen, 1977; Day, 1980; Day & Landon, 1977; Hirschman, 1970; Maute & Forrester, 1993; Singh, 1988; Warland, Hermann, & Willits, 1975). Among them, the three-dimensional classification of Singh (1988) –voice, private and third-party responses- seems to be the most widely accepted. In particular, third-party complaints constitute the point of interest of our study.

Secondly, literature has examined the determinant factors of complaint behavior, with various approaches. The satisfaction approach suggests that complaint behavior is the result of dissatisfaction with a given consumption experience (Bearden & Teel, 1983; Prakash, 1991; Richins, 1983; Yi, 1990). Research into emotions in marketing (for in depth coverage, see Bagozzi, Gopinath, & Nyer, 1999) proposes that the manifestation of negative emotions has a direct and positive impact on complaint behavior (Casado & Mas, 2002; Day, 1984; Folkes, Koletsky, & Graham, 1987; Westbrook, 1987; Zeelenberg & Pieters, 2002). Another perspective combines the two streams of research - dissatisfaction and emotions-, proposing alternative conceptualisations of their effect on complaint behavior. Thus, some authors have found that dissatisfaction with service could mediate the influence of negative emotional response on complaint behavior, given that a negative emotional state precedes dissatisfaction (e.g., Mooradian & Olver, 1997; Tsiros & Mittal, 2000; Westbrook, 1987; Zeelenberg & Pieters, 2002); whereas recently, anger (a specific emotion) was found to be a full mediator between service encounter dissatisfaction and complaint behavior (Bougie, Pieters & Zeelenberg, 2003). Other analysed antecedents of complaint behavior are the perceived probability of successful compensation (e.g., Richins, 1983), consumer attitude towards complaining (e.g., Bearden & Mason, 1984), demographic characteristics (e.g., Warland et al., 1975), causal attributions (e.g., Folkes, 1984) and the intensity of the dissatisfaction experienced (e.g., Singh & Pandya, 1991), among others.

Thirdly, research analyses the consequences of complaint behavior from various perspectives. Richins (1987) is based on the theory of voice/exit of Hirschman (1970) and proposes a negative relationship between complaint behavior and intention to repurchase; a link that is not proved empirically. The majority of research, however, is centred on the management of complaints received. Its logic is based on the idea that complaint handling systems are used by companies as a defensive strategy aimed at reducing the rate of customer defection or switching behavior, as they can turn dissatisfied, complaining customers into loyal ones (Fornell, 1992; Fornell & Wernerfelt, 1987, 1988; Fornell, Johnson, Anderson, Cha, & Bryant, 1996; Scaglione, 1988). Underlying this proposal is the so called “service recovery paradox”, through which extraordinary customer recovery efforts can generate greater satisfaction than if there had been no problem in the first place (e.g., McCollough, Berry, & Yadav, 2000; Smith & Bolton, 1998; Tax, Brown, & Chandrashekar, 1998). Furthermore, Fornell and Wernerfelt (1987, 1988) demonstrate mathematically, with microeconomic models, that a defensive marketing strategy (retaining customers through complaint handling systems) brings about an increase in market share and profits, as well as reducing the costs of offensive marketing (obtaining additional customers, encouraging brand switching and increasing buying frequency). However, empirical studies in this area only study the impact on intention to repurchase. The TARP Report (1979) presents data that suggests that customer loyalty could be strengthened by a company complaint handling system. Gilly and Gelb (1982), TARP (1981) and Andreassen (1999) find a positive relationship between satisfaction with complaint handling and intention to repurchase. Finally, Fornell (1992), although not using direct measurements of complaint handling efficacy, assumes that the positive/negative relationship found between complaints and intention to repurchase in various sectors, implies that complaint handling systems are successful/unsuccessful at turning complaining customers into loyal customers (Fornell et al., 1996).

In any case, we have not found any studies that examine the impact of complaints on company performance outside the area of service recovery. In this sense, the major objective of the present study is to fill this gap in CCB research, proposing research hypotheses on the relationship between complaint behavior and company performance. To do this, we focus on third-party complaints, specifically from the Bank of Spain’s Complaints Service, which publishes an Annual Report on complaints to Spanish banks. The methodology applied is based on an event study to estimate the variation in company share returns resulting from the publication of these annual reports between 1992 and 2001; as well as a regression analysis to examine the impact of

service quality on the above relationship. The empirical application is made in Spain on a sample of 11 banks about which there were 4702 complaints and which were quoted on the Madrid stock market between 1992 and 2001.

The paper is organised in the following way: in the second section we propose and argue the hypotheses; the third section covers the design of the study, specifying the methodology used and the data collection process; in the fourth section we present and discuss the results obtained and, finally, we offer the main conclusions and limitations.

## **2. Conceptual framework**

### ***2.1. The third-party complaints***

The majority of academic research into complaint behavior has moved from purely descriptive to fundamentally theoretical analysis. However, less attention has been paid to third-party complaints; where the customer takes a concern to a government agency, consumer protection group, Better Business Bureau, or some formal party external to the original marketing exchange (McAlister & Erffmeyer, 2003).

Third-party actions are most likely to occur when consumers (Duhaime & Ash, 1979; Singh, 1989; Tipper, 1997; Ursic, 1985):

- i) perceive that the company's initial remedy was not adequate;
- ii) have good access to the legal system and other formal agencies;
- iii) believe that all other complaining options have been unsuccessful;
- iv) experience high anxiety levels about the complaint situation, and
- v) have generally negative attitudes toward business practices.

Third-party complaints are especially important and troublesome to marketers since they represent a higher-order action than complaining to friends, family, the salesperson or the company (Feick, 1987). The effort and involvement associated with third-party complaining behavior normally indicate a degree of consumer dissatisfaction, company unresponsiveness or related factor, which can severely threaten

marketing relationships and effectiveness. In addition, third-party complaints can result in extensive legal costs, regulatory intervention and corporate reputation problems (Tipper, 1997).

Despite the importance of third-party complaints, we have not found any studies that empirically analyse their impact on company performance. This study is, therefore, an attempt to fill this gap in marketing literature, joining the demands for greater attention to be given to third-party complaints made by various authors (e.g., Fisher, Garrett, Cannon, & Beggs, 1999; Singh, 1989).

## ***2.2. The relationship between third-party complaints and firm performance***

As indicated in the previous section, third-party complaints suggest, on the one hand, customer dissatisfaction or related factors which threaten marketing relationships, and, on the other hand, corporate reputation problems.

With regard to the first aspect, the literature of dissatisfaction considers a complaint to be a negative response to dissatisfaction, which precedes customer defection (Richins, 1983; Scaglione, 1988; Zeithaml, Berry, & Parasuraman, 1996). Additionally, research into emotions holds that emotional negative responses (such as anger or disappointment) to a service failure precede complaint behavior and less intention to repurchase (Weiner, 2000; Zeelenberg, Van Dijk, Manstead, & Van der Pligt, 1998, 2000). Essentially, and despite their differences, both perspectives suggest that third-party complaints negatively affect company performance, as complaints precede customer defection.

Firstly, less customer loyalty implies a lower probability of continuing to purchase from the same provider (Fornell, 1992), which will be reflected by lower company returns, as less loyalty jeopardizes a steady stream of future cash flow (Reichheld & Sasser, 1990; Rust & Zahorik, 1993; Rust, Zahorik, & Keiningham, 1994, 1995). Secondly, lower customer retention should increase a company's future transaction costs as it will no longer benefit from the purchase of other goods and services (offered by the firm) by satisfied customers, or the price premiums which satisfied customers are willing to pay (Reichheld & Sasser, 1990). Moreover, the company needs to spend heavily (advertising, promotions and sales costs) to gain new customers (Zeithaml et al., 1996). Additionally, dissatisfied customers are most likely to engage in negative word-of-mouth (Anderson, 1994; Reichheld & Sasser, 1990), which

could reduce the effectiveness of advertising and the attractiveness of warranties (Anderson, Fornell, & Lehman, 1994).

However, apart from the effect on results from less customer retention, third-party complaints reflect product/service failure and authors such as Crosby (1987) and Garvin (1988) believe that companies should allocate a high level of resources to the handling and management of complaints, as well as rework any defective products, which worsens productivity. Along this line, Anderson et al. (1994) and Anderson, Fornell, and Rust (1997), following an economic approach, suggest that increments in costs associated to product failure and productivity reduction will diminish company performance.

Finally, third-party complaints negatively influence company performance as a result of loss of company reputation. The dissatisfaction of the complaining customer would indicate a worsening company reputation. Lower company reputation does not aid in introducing new products –given the instant awareness of the existence of complaints and the increase of risk of trial for the buyer (Robertson & Gatignon, 1986)-, it is not beneficial for maintaining and establishing relationships with suppliers, distributors and potential allies (Anderson & Weitz, 1989), nor does it facilitate the building of other company assets such as brand equity (Aaker, 1992).

In this way, we can assume that third-party complaints have a negative impact on future company profits. Additionally, we can argue that the position achieved by a company in terms of customer complaints to an external agency is of great strategic importance, as it attests to its vulnerability or effectiveness in defending its current customers and future profits. In particular, a company's ranking in terms of complaints made allows a distinction to be made, in a competitive context, between the winners and the losers over the temporal period analysed. Therefore, we propose the following hypotheses:

***H1. The publication of the Annual Complaints Service Report by an external agency is associated with a reduction in the performance of the firm involved.***

***H2. A greater number of complaints reported in the Annual Complaints Service Report is associated with a greater reduction in the performance of the firm involved.***

### 3. Research design

#### 3.1. Methodology

The methodology developed to reach the objectives set has two stages. The first estimates company return variations due to publication of annual reports on complaints by an external agency (Bank of Spain). For this, we apply the “event study” technique, which solves some operational problems derived from the way in which company performance is usually measured. The majority of studies use financial information from accounting records to measure performance, but their conclusions are largely not comparable due to disparities between the variables used. Furthermore, accounting data can be insufficient as it does not incorporate expectations on future profits and can lead to confusion due to the deficiencies inherent in its dependence on different conventions. Finally, accounting measurements are inappropriate in certain contexts, such as that of complaints and dissatisfaction, whose returns are manifested over long periods of time (Anderson et al., 1994; Lambert, 1998).

In order to avoid these measurement problems, our study has a different approach; proposing the application of the technique of the *event study* on stock market share prices<sup>1</sup>. This method is based, firstly, on the portfolio theory of financial economics on the premise that stock markets are efficient and, secondly, on the idea that company share prices better reflect strategy (e.g. of customer satisfaction) than financial records (McWilliams & Siegel, 1997). In an efficient stock market, share prices reflect all the available information on a company; in fact, any information received by the market (e.g. the publication of the Annual Complaints Service Report) will be immediately incorporated by investors into its share price. Likewise, any change to a company’s share price will reflect, without bias, alterations to its future cash flows. Because of this and faced with the introduction of new information on customer complaints from the annual report of an external agency, the examination of share price behavior allows us to explicitly analyse underlying changes to unbiased market predictions on the future returns of a company due to its inclusion in the report. This

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<sup>1</sup> Anderson et al. (1994) and Ittner and Larcker (1998) show that stock market measurements (stock prices) can be of great interest as indicators of performance derived from annual indexes of expectations, quality and customer satisfaction (American Customer Satisfaction Index, ACSI; Swedish Customer Satisfaction Barometer, SCSB).



allows us to isolate returns derived from third-party complaints by eliminating the impact of other events and avoiding some of the problems of accounting data.

In particular, an *event study* measures the impact of unanticipated events on share prices, being based on the estimation of a market model for each company event and on the subsequent calculation of abnormal returns. The returns on the share price of a company  $i$  on day  $t$  ( $R_{it}$ ), are expressed as:

$$R_{it} = \alpha_i + \beta_i R_{mt} + \varepsilon_{it} \quad (1)$$

where  $\alpha_i$  are returns on company shares which are independent of the market;  $R_{mt}$  is the rate of returns of the market portfolio;  $\beta_i$  is the returns sensitivity of share  $i$  to variations to market returns; and  $\varepsilon_{it}$  is the random disturbance.

The estimation of equation (1) allows us to calculate daily abnormal returns (AR) for news on company  $i$ :

$$AR_{it} = R_{it} - (\hat{\alpha}_i + \hat{\beta}_i R_{mt}) \quad (2)$$

where  $\hat{\alpha}_i$  and  $\hat{\beta}_i$  represent the OLS parameter estimates obtained in the regressions (1) for the period  $T$  preceding the event. Abnormal returns are those obtained by a company once investors have adjusted for “normal” returns; and returns on shares are adjusted by subtracting expected returns from actual returns with any significant difference being considered abnormal.

To analyse the effect of the publication of the Annual Complaints Service Reports by an external agency (Bank of Spain) on the share prices of the entities concerned (Hypothesis 1), we test:

1) The significance of the average of standardized abnormal returns (SAR) for  $N$  news of the companies on every day of the event window:

$$\overline{SAR}_i = \frac{1}{N} \sum_{i=1}^N SAR_{it} \quad (3)$$

being  $SAR_i = \frac{AR_{it}}{S_{it}}$ ;  $S_{it} = S_i \sqrt{1 + \frac{1}{T} + \frac{(R_{mt} - R_m)^2}{\sum_{t=1}^T (R_{mt} - R_m)^2}}$ ;  $S_i$  the standard deviation of the

residuals of the regression estimated before publication;  $T$  the period before the estimation plus the event window; and  $R_m$  is the mean return on the market portfolio in the period of estimation.

To analyse whether these abnormal returns are significantly distinct from zero we use the parametric test proposed by Jaffe (1974):

$$t_1 = \frac{\sum_{i=1}^N AR_{i0}}{\sqrt{\sum_{i=1}^N \sigma_{e_i}^2 + \sum_{i=1}^N \sum_{\substack{j=1 \\ i \neq j}}^N \sigma_{e_i e_j}}} \quad (4)$$

where  $N$  is the number of news items,  $AR_{i0}$  are the abnormal returns on day 0 of the event, and  $\sigma_{e_i}^2$  and  $\sigma_{e_i e_j}$  represent, respectively, the variance and covariance of shares  $i$  and  $j$  obtained in equation (1) in the period of estimation. The choice of this test is justified by the potential presence of contemporary correlation problems in the chosen sample, which can come from the existence of overlapping periods in any of the news items on different shares and from the fact that the companies analysed are from the same industry (Bernard, 1987; Collins and Dent, 1984).

Additionally, to avoid possible problems derived from lack of normality in the returns, we also use the non-parametric test of Corrado (1989):

$$t_2 = \frac{\frac{1}{N} \sum_{i=1}^N \left[ K_{i0} - \frac{1}{2}(T+1) \right]}{\sqrt{\frac{1}{T} \sum_{t=1}^T \left[ \frac{1}{N} \sum_{i=1}^N \left[ K_{it} - \frac{1}{2}(T+1) \right] \right]^2}} \quad (5)$$

where  $K_{i0}$  is the range occupied by abnormal returns  $AR_{it}$  in the temporal series of abnormal returns estimated for share  $i$  and  $T$  is the total number of days analysed. This test uses ordinal information on returns on the event day and is not affected by variance in distribution.

2) The significance of the average standardized cumulative abnormal returns over  $k$  days (event window for  $N$  news items):

$$ACAR_t = \frac{1}{N} * \frac{\sum_{i=1}^N CAR_{it}}{\left[ \frac{(T-2)}{(T-4)} \right]^{1/2}} \quad (6)$$

where  $T$  is the period before the estimation plus the event window, and

$$CAR_i = \frac{1}{k^{1/2}} \sum_{t=1}^k SAR_{it} .$$

To test whether the average standardized cumulative abnormal returns is significantly distinct from zero we use the test  $Z = ACAR_t N^{1/2}$ , which follows a standardised normal distribution for large  $N$ .

Finally, the second section identifies the determinants of company performance in terms of the number of complaints received per company (hypothesis H2). To do this, we use a regression model that explains abnormal returns through this dimension.

### 3.2. *Sample*

The design of the study has been developed for the particular case of a sample based on the Spanish banking sector as a source of data on third-party complaints, which is an appropriate choice for our objectives due to the following aspects. Firstly, the banking sector is subject to constant supervision by financial authorities, which have an obligation to guarantee the honesty of banks (Canals, 1992), given the strategic value of the sector to a country's economy. Essentially, the behavior of banks transcends the banking sector in a more significant manner than is the case in other sectors. This is because banking institutions live on the confidence and prudence inspired in the economic agents. Untrustworthiness brought about by a bank could spread to the banking system as a whole and result in a massive withdrawal of funds which banks would not be able to handle and the consequent paralysis of the economy. On the other hand, the actions of both public and private consumer organisations constitute an element that has strengthened control over banking practices in Spain in recent years. Consequently, public organisations have been developing a system of supervision for the banking sector, which includes the Complaints Service created by the Bank of Spain (see section 3.4).

Secondly, banking products are highly diffused in the consumer market (almost all households have some type of banking product), which means that the probability of unsatisfactory experiences resulting in complaints is quite high. In fact, the banking sector is one of those that receive the greatest number of complaints to Spanish consumer organisations.

Finally, there is the availability of data on complaints from the Annual Complaints Service Report of the Bank of Spain, which can be consulted by any economic agent (consumers, companies and government organisations). Electronic versions of the most recent reports can be found on the Bank of Spain web site ([www.bce.es](http://www.bce.es)).

In the sample of banks selected, we include all the banks quoted on the Madrid stock market that have received complaints through the Complaints Service of the Bank of Spain. These eleven banks constitute a numerically small sample, but they represent the 75.3% of the sector's total assets in 2001, according to information from the Banking Control Council. In any case, the study may have limited generalisation onto the whole sector due to the limited sample, so we will make our conclusions only in terms of the banks analysed.

### **3.3. *Data collection***

The application of the proposed methodology is based on the following data collection process (McWilliams & Siegel, 1997). In the first stage we consider all banks quoted on the Madrid stock market that have complaints registered in the Complaints Service of the Bank of Spain between 1992 and 2001. These are: the Banco Bilbao-Vizcaya, Banco Bilbao-Vizcaya-Argentaria (a result of a merger in 2000 of the banks of Bilbao-Vizcaya and Argentaria), Banco de Santander, Banco Central Hispano, Banco Santander-Central-Hispano (formed in 1999 from the merger of the Banco de Santander and the Banco Central Hispano), Banco Popular, Bankinter, Banco Español de Crédito (Banesto), Banco Zaragozano, Banco Atlántico and Banco Pastor.

In the second stage, the first news items about the 10 Annual Reports of the Complaints Service of the Bank of Spain between 1992 and 2001 are identified. To this end, the necessary search was made in the BARATZ database, which provides information published in 28 different newspapers of national or regional coverage. The event date is defined as the first day on which the news is disclosed in any of the publications included in the database.

In the third stage, in order to identify any abnormal behavior in the returns on these companies' shares, we select the  $k$  length of the "event window". In other words, we consider the five days before and after the publication date (-5, +5) due to the fact that, although the majority of information on complaints is usually quickly incorporated into share prices, it can occasionally be leaked out before its formal publication or its effect on the share price can be delayed.

In the fourth stage, we reject the impact of publication of annual reports on complaints on banks whose "event window" coincides with the publication of certain announcements by the bank itself, such as public share offers, dividend declarations and large-scale share acquisitions. This allows for the exclusive measurement of the effect of third-party complaints and eliminates the possibility of including confusing effects. This reduces the sample to 47 news releases about annual reports on complaints relating to the 11 banks.

In the fifth stage, we collect data on the daily share returns ( $R_{it}$ ) of the eleven banks. We, therefore, use stock market data, as opposed to accounting data, to measure company performance. The historical data sample selected is of the daily returns of the 11 banks quoted on the Madrid stock exchange in the period from the 2<sup>nd</sup> of January 1992 to the 31<sup>st</sup> of December 2001. This temporal period is defined by the availability of daily market information. As a subrogate variable of the true return on the market portfolio ( $R_{mt}$ ), we use the IBEX-35 index, which is representative of the Spanish stock market. The information is obtained from the Stock Exchange Information System.

Finally, in order to analyse the determinants of excess returns, we collect information on the number of complaints/branches, that is, the volume of complaints about each entity, corrected by their size. This ratio denotes the position reached by a bank as regards customer complaints to an external agency. Information relative to the volume of complaints received by each entity is found in the Annual Complaints Service Reports of the Bank of Spain, while the number of branches per bank comes from the Commercial Performance Information Bureau of the Bank of Spain.

As a control variable, we use company size. This variable is used to control economies and diseconomies of scale at a corporate level. It is measured by assets in the event year, information that is found in the Commercial Performance Information Bureau of the Bank of Spain.

### **3.4. *Consumer complaint procedure***

The Complaints Service of the Bank of Spain was created in 1987 in order to receive and process complaints by banking customers about acts that possibly break rules of discipline or good practice. For a complaint to be accepted by the Service, it is essential to show that a written complaint was first made to the Customer Complaints Manager (or equivalent) of the bank, when available (75% of Spanish banks have a person or department to handle complaints). In the period from 1992-2001 the Complaints Service received an annual average of 20 complaints per bank (of the 300 financial entities operating in Spain in that period, half are banks).

Once a complaint is accepted, the entity concerned has the opportunity to put its case forward. As a rule, the process concludes with a report which states whether the entity has complied, or not, with good banking practices. This report is sent to the customer and the bank concerned. Although the reports made by the Service have no official power, banks largely comply with them.

The Complaints Service publishes an annual report which includes a statistical summary of proceedings taken in the previous year: a summary of complaints (presented, accumulated and in process), the location of the presentation of the complaint, the nature of the entity complained about (banks, savings banks, credit cooperatives, other financial credit establishments), the entities receiving most complaints and the type of complaint, or the material object of complaint (active operations, passive operations, credit cards etc.). These reports are also available on the Internet ([www.bce.es](http://www.bce.es)).

In summary, the essential nature of this external agency coincides with the following dimensions, which Singh (1988) uses to describe customer complaint behavior to external agencies: (a) it contacts companies (objects of complaints) so that they are aware of the customer's problem and (b) advises other consumers of problems found in companies' services.

## 4. Results

### 4.1. *Estimation of return variation resulting from the publication of the Annual Complaints Service Report*

Taking the *event study* as a starting point, this section estimates the parameters of the market model (1) for a period  $T$  of 145 days (from  $t-150$  to  $t-5$  days relative to the event date  $t=0$ ), which is a temporal period often used in this type of study. The parameters estimated allow us to calculate abnormal returns for the event date (2) derived from the publication of the Complaints Service Report by the Bank of Spain.

Table 1 presents the estimations of the average abnormal returns (AR average) and the average standardised abnormal returns (SAR average) on each of the days comprising the event windows for the 47 event impacts on the banks. The results obtained show that, on average, the publication of annual reports on complaints is associated with negative abnormal returns: average abnormal returns are of  $-0.40\%$  on the event date,  $-0.35\%$  on the day after the event and  $-0.46\%$  on  $t=3$ . They are all significant using the parametric test of Jaffe and the non parametric test of Corrado. On day  $t=3$  we find the greatest abnormal losses or negative excess returns for the period  $\pm 5$  days around the event. This indicates that, on average, entities mentioned in the annual reports of the Complaints Service of the Bank of Spain, suffer a loss of  $-0.46\%$  of abnormal returns on day  $t=3$ .

Alternatively, a standard event study practice is to examine cumulative abnormal returns for various windows around the event date. The analysis of the abnormal returns, which surround the day of publication, allows us to take account for any uncertainty around the real event date and find the accumulative effect of an event. Also, the effect can be felt over various days around the event, given the gradual availability of information and, therefore, of interpretation of the impact of the event on future company profits. Along this line, we show (see Table 1) that the average standardised cumulative abnormal returns (ACAR) in the pre-event windows  $\{(-5, -1), (-4, -3), (-4, -2), (-3, -1), (-2, 0) \text{ and } (-1, 0)\}$  are not significant, which seems to show that information is not divulged before publication (e.g. press conferences).

**Table 1. Variation of returns due to publication of Annual Complaints Service Reports**

Event day	Average AR (%)	Average SAR (%)	$t^a$	$t^b$	Event window	Cumulative Average AR (%)	$Z^c$
-5	-0.3466	-0.5947	-1.1737	-1.5691	(-5,-1)	-0.3716	-0.9463
-4	-0.0799	-0.2022	-0.4552	-0.9656	(-4,-3)	-0.1605	-0.6465
-3	-0.0806	-0.2509	-0.4590	-0.5076	(-4,-2)	-0.0554	-0.1823
-2	0.1051	0.0961	0.5984	0.5271	(-3,-1)	0.0549	0.1807
-1	0.0304	0.1035	0.1735	1.2136	(-2,0)	-0.2665	-0.8762
0	-0.4020	-0.7169	-2.2895***	-2.3970***	(-1,0)	-0.3716	-1.4963
1	-0.3564	-0.699	-2.0297***	-2.6158***	(0,+2)	-0.9835	-3.2336***
2	-0.2250	-0.3648	-1.2813	-1.2978	(+1,+2)	-0.5814	-2.3413***
3	-0.4662	-0.7709	-2.6549***	-3.9127***	(+1,+3)	-1.0477	-3.4445***
4	-0.0559	-0.0868	-0.3184	-0.9726	(+2,+4)	-0.7472	-4.8396***
5	-0.317	0.0827	-0.1807	-0.9687	(+3,+5)	-0.5539	-1.8211

NOTE: AR = Abnormal Return; SAR = Standardized Abnormal Returns

<sup>a</sup> Statistic  $t$  based on the parametric contrast of Jaffe (1974)

<sup>b</sup> Statistic  $t$  based on the nonparametric contrast of Corrado (1989)

<sup>c</sup>  $Z = \text{ACAR}_t N^{1/2}$ , statistical test that follows a standardized normal distribution for large  $N$

\*\*\* Prob.<0.01; \*\* Prob.<0.05; \* Prob.<0.10.

However, the panorama changes when we look at the post-event windows. Four temporal periods:  $\{(0, +2), (+1, +2), (+1, +3), \text{ and } (+2, +4)\}$  show significant ACAR, which indicates that some investors react on the same day and others later. To be precise, the global 3-day window  $(+1,+3)$  shows the greatest loss of ACAR with a value of -1.04%. This reaction delay seems plausible as news of the publication of the annual reports on complaints could motivate investors to re-examine company product positioning and marketing strategies. It seems, therefore, that they make a negative valuation of strategies and react accordingly (Mathur & Mathur, 1995). Apart from the statistical significance of the results, their economic importance is illustrated as follows (Nayyar, 1995): i) an ACAR of -1.04% over three days is the equivalent of annual returns of -239.01 %; and, ii) an ACAR of -1.04% for an average sample market value (product of the number of shares by the share price) of Euro 89,892.83 million on  $t=1$ , implies a loss in value of Euro 934.88 million in three days.

In summary, the evidence of significant negative ARs on the event date ( $t=0$ ), on  $t=1$  and on  $t=3$ , along with the negative ACARs for windows  $(0, +2)$ ,  $(+1, +2)$ ,  $(+1, +3)$ , and  $(+2, +4)$ , allow us to accept hypothesis H1 that the publication of the annual reports of the Complaints Service of the Bank of Spain has a negative effect on the performance of the banks involved. This conclusion has the implication that the publication of the annual



report is an index which provides share holders and investors with useful information (in line with Fornell, 1992), who give lower potential value to entities which appear in the report, as they assume that customer complaints have a negative impact on future profits due to expectations of lower customer loyalty, increased service failure costs and lower reputation (Anderson et al., 1994).

#### **4.2. Determinants of return variation derived from complaints**

Once we have proved that the publication of the annual reports of the Complaints Service of the Bank of Spain is associated with negative changes to the returns on the shares of the banks implicated, we examine the possible influence of the number of complaints per branch. To do this, we regress the average cumulative abnormal returns (ACAR) for the three days of (+1,+3) with the variables shown in the data collection section. Table 2 shows the descriptive statistics of the variables for the sample of 47 impacts of the publication of the annual reports. By using normality tests, such as that of Jarque-Bera, the assumption that residuals are normally distributed cannot be rejected. The test of Durbin-Watson rejects the existence of autocorrelation of order 1 residuals and the test of Breusch-Godfrey rejects order 2 autocorrelation. With respect to homoscedasticity, White and Breusch-Pagan tests accept the null hypothesis of equality of residual variance. Consequently, the estimation is made for OLS.

**Table 2. Descriptive Statistics**

	<i>Mean</i>	<i>Standard Deviation</i>	<i>Max.</i>	<i>Min.</i>
Asset (mill. €)	42610	52523	193570	2134
Number of complaints / branches	0.0763	0.321	0.1703	0.0215
Complaints	99	104	440	15
Branches	1362	1113	3830	245
<i>Correlation between asset and number of complaints/branches</i>			0.1441	

The joint significance tests of the independent variables allow us to conclude that significant information is obtained at a level below 1% by introducing the variables of complaints per branch and size (see Table 3). Likewise, the coefficients of determination and adjusted  $R^2$  are situated around 14.65 % and 10.23 % respectively.

**Table 3. Explicative factors of the excess in returns (standard errors in brackets)**

<b>Dependent Variable</b>	<b>Intercept</b>	<b>Number of complaints / branches</b>	<b>Size</b>	<b>R<sup>2</sup></b>	<b>Adjusted R<sup>2</sup></b>	<b>F</b>
Average ACAR	0.032*** (0.005)	-0.162** (0.071)	-1.13 E-11 (4.39 E-11)	0.146	0.102	3.183**

\*\*\* Prob.<0.01; \*\* Prob.<0.05; \* Prob.<0.10.

The significance tests of the individual parameters show that the number of complaints per branch has an influence on the banks' abnormal returns, as its coefficient is significant at a level below 5%. The negative sign of the variable of number of complaints per branch shows that a greater value for this ratio is associated with higher negative abnormal returns, which leads us to accept hypothesis H2. In other words, a higher number of complaints per branch received by a bank in the annual report of an external agency reflects its vulnerability as regards customer retention and future profit protection and would result in it being a "loser" in the period analysed. This represents a lower value provided to customers and lower potential value for a shareholder, who would be less motivated to get involved in an investment relationship with the bank (Ngobo, 1999). An alternative explanation, in the field of banks with complaint handling systems, would be the so called "vicious circle of complaints" (Fornell & Westbrook, 1984) according to which, as a bank receives more complaints it becomes less responsive so that, instead of making good use of its complaints procedure system, the company behaves dysfunctionally (Fornell, 1992).

Finally, we find no significant influence of size as a control variable on excess returns.

## 5. Discussion

The implication that company performance can be explained through third-party complaints has led us to analyse these phenomena in the Spanish context of the publication of annual reports by the Complaints Service of the Bank of Spain between 1992 and 2001.

The methodology of analysis is based on an *event study*, starting with the theory of portfolio of financial economics with the premise that stock markets are efficient and that

company share prices better reflect their service quality strategy and their customers' satisfaction than their accounting structure. To be precise, this method measures the impact of a sample of events (publication of Annual Complaints Service Reports by the Bank of Spain) on share prices, estimating a market model for each news item referring to a company and calculating the abnormal returns deriving from each event. Later, a regression analysis examines the impact of the number of complaints per branch on excess returns. The methodology is shown to be particularly useful for analysing the impact of complaints on performance, avoiding some inherent problems of using accounting data.

The empirical application carried out on the sample finds significant negative returns on the event date ( $t=0$ ), on the day after the event ( $t=1$ ) and on  $t=3$ , as well as negative accumulated returns in different post-event windows, which suggests that, on average, the stock market reacts negatively to the publication of the annual reports of the Complaints Service of an external agency. Likewise, the model of behavior proposed shows that abnormal returns depend on the number of complaints per branch, suggesting a negative relationship between complaints per branch and performance.

### ***5.1. Managerial implications***

The implications of these results to business management are as follows: firstly, the fact that third-party complaints negatively affect expectations of future profits has the important strategic implication that resources allocated to improving customer satisfaction (reducing complaints or applying adequate complaint handling programmes (Fornell & Wernerfelt, 1987)) should be treated as an investment rather than an expense. Additionally, customer satisfaction is a market based asset (Srivastava, Shervani, & Fahey, 1998), meaning that the implantation of an orientation towards customers as assets implies aligning company processes, resources, result measurement and organisational structure towards dealing with customers as assets (Anderson et al., 1994).

Secondly, third-party complaints are an especially important dimension insofar as complaints which go this far are usually evidence of an breakdown in the marketing process of building relationships and exchange, as well as of loss of reputation (McAlister & Erffmeyer, 2003). This implies the need to implement effective complaint management systems that include the monitoring of complaints to external agencies.

## **5.2. *Limitations***

As limitations of the study we would like to point out the possible existence of bias in the results due to the selection of Madrid stock market quoted banks. In this way, we do not consider certain other financial entities (savings banks and banks) which are not quoted on the stock market but which receive complaints. Moreover, the entities selected are of a large size, which restricts generalisation of the conclusions.

However, we consider this research to be a new contribution to the study of the relationship between third-party complaints and company performance.

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